## CLAIMS

- 1. A composition based on zirconium oxide comprising cerium oxide in an atomic ratio Zr/Ce > 1, and in addition comprising lanthanum oxide and an oxide of a rare earth other than cerium and lanthanum, characterized in that after calcination for 6 hours at 1150°C it has a specific surface of at least 10 m²/g.
- 2. The composition as claimed in claim 1, characterized in that after calcination for 6 hours at  $1150\,^{\circ}\text{C}$  it has a specific surface of at least  $15\,\text{m}^2/\text{g}$ .
- 3. The composition as claimed in claim 1 or 2, characterized in that after calcination for 6 hours at  $1200\,^{\circ}\text{C}$  it has a specific surface of at least  $3~\text{m}^2/\text{g}$ .
- 4. The composition as claimed in one of the preceding claims, characterized in that after calcination for 6 hours at 900°C it has a specific surface of at least 50  $\text{m}^2/\text{g}$ , and more particularly of at least 70  $\text{m}^2/\text{g}$ .
- 5. The composition as claimed in one of the preceding claims, characterized in that after calcination for 6 hours at  $1000\,^{\circ}\text{C}$  it has a specific surface of at least  $40\,\text{m}^2/\text{g}$ .
- 6. The composition as claimed in one of the preceding claims, characterized in that the rare earth is neodymium.
- 7. The composition as claimed in one of the preceding claims, characterized in that the contents by weight of oxides are at least 50% for zirconium,

less than 50% for the oxide of cerium, 5% at most for lanthanum and 15% at most for the rare earth.

- 8. The composition as claimed in one of the preceding claims, characterized in that it is sulfur-free.
- 9. A method of preparation of a composition as claimed in one of the preceding claims, characterized in that it comprises the following stages:
  - a mixture is prepared comprising compounds of cerium, of lanthanum and of the aforementioned rare earth and a sol of a zirconium compound;
  - said mixture is brought into contact with a solution of a basic compound whereby a precipitate is obtained;
  - said precipitate is heated in an aqueous medium;
  - the precipitate thus obtained is calcined.
- 10. The method as claimed in claim 9, characterized in that it uses a sol of a zirconium compound that was obtained by heat treatment of an aqueous solution of a zirconium oxychloride.
- 11. The method as claimed in claim 9, characterized in that it uses a sol of a zirconium compound that was obtained by the action of nitric acid on a hydroxide or carbonate of zirconium in a molar ratio NO<sub>3</sub> /Zr between 1.7 and 2.3 in the case of a hydroxide and 1.7 and 2 in the case of a carbonate.
- 12. The method as claimed in one of claims 9 to 11, characterized in that the precipitate is heated at a temperature of at least 100°C.
- 13. The method as claimed in one of claims 9 to 11, characterized in that heating of the precipitate is carried out at basic pH.
- 14. The method as claimed in one of claims 9 to 12, characterized in that the aforementioned mixture is

brought into contact with the solution of a basic compound by introducing said mixture into this solution.

- 15. A catalytic system, characterized in that it comprises a composition as claimed in one of claims 1 to 8.
- 16. A method of treatment of the exhaust gases of internal combustion engines, characterized in that a catalytic system as claimed in claim 15 or a composition as claimed in one of claims 1 to 8 is used as the catalyst.